



CONTENTS OF VOLUME 138

Vol. 138C, No. 1

Obituary

R.J. Walker

- 1 Professor Gerald Allan Kerkut: 19 August 1927–6 March 2004:
Editor: *Comparative Biochemistry and Physiology* 1960–1994

General papers

P.C. Das, S. Ayyappan, B.K. Das and J.K. Jena

- 3 Nitrite toxicity in Indian major carps: sublethal effect on selected enzymes in fingerlings of *Catla catla*, *Labeo rohita* and *Cirrhinus mrigala*

D.J. Spurgeon, S.R. Stürzenbaum, C. Svendsen,
P.K. Hankard, A.J. Morgan, J.M. Weeks and
P. Kille

- 11 Toxicological, cellular and gene expression responses in earthworms exposed to copper and cadmium

L.T. García, L.T. Parreiras e Silva, O.H.P. Ramos,
A.K. Carmona, P.A. Bersanetti and
H.S. Selistre-de-Araujo

- 23 The effect of post-translational modifications on the hemorrhagic activity of snake venom metalloproteinases

F. Gagné, C. Blaise and J. Hellou

- 33 Endocrine disruption and health effects of caged mussels, *Elliptio complanata*, placed downstream from a primary-treated municipal effluent plume for 1 year

C. Manzl, G. Krumschnabel, P.J. Schwarzbaum
and R. Dallinger

- 45 Acute toxicity of cadmium and copper in hepatopancreas cells from the Roman snail (*Helix pomatia*)

M. Numata, J.P. Fawcett, R.J. Rosengren and
S. Wanwimolruk

- 53 Ontogeny of hepatic microsomal 3-hydroxylation of quinine in Adélie Penguins

S. Dupont, J. Mallefet and C. Vanderlinden

- 59 Effect of β -adrenergic antagonists on bioluminescence control in three species of brittlestars (Echinodermata: Ophiuroidea)

M.E.F. Da Silva, J.A. Silva, S. Marangoni,
J.C. Novello and N.C. Meirelles

- 67 A new method to purify hepatic CYP1A of *Prochilodus scrofa*, a Brazilian freshwater fish

G. Tripathi and P. Verma

- 75 Fenvalerate-induced changes in a catfish, *Clarias batrachus*: metabolic enzymes, RNA and protein

M.R. Milnes, D. Allen, T.A. Bryan, C.D. Sedacca
and L.J. Guillette Jr.

- 81 Developmental effects of embryonic exposure to toxaphene in the American alligator (*Alligator mississippiensis*)

K.F. Rewitz, C. Kjellerup, A. Jørgensen, C. Petersen
and O. Andersen

- 89 Identification of two *Nereis virens* (Annelida: Polychaeta) cytochromes P450 and induction by xenobiotics

M.V. Andrade, M.P.R. Caraméz, E.M.N.N. Abreu,
M. Dolnikoff, E.D. Omar, I.T. Velasco and
J.R. Cunha-Melo

- 97 Lung compliance, plasma electrolyte levels and acid–base balance are affected by scorpion envenomation in anesthetized rats under mechanical ventilation

S.J. Hemmings and X. Song	105	The effects of elk velvet antler consumption on the rat: development, behavior, toxicity and the activity of liver γ -glutamyltranspeptidase
I		Instructions to Authors
V		Announcement for the Second Workshop on Comparative Aspects of Oxidative Stress in Biological Systems

Vol. 138C, No. 2

General papers

E.A. Hassoun and V. Kini	113	Effects of superoxide dismutase and polyclonal tumor necrosis factor- α antibodies on chloroacetate-induced cellular death and superoxide anion production by J774.A1 macrophages
G. Damiens, E. His, M. Gnassia-Barelli, F. Quiniou and M. Roméo	121	Evaluation of biomarkers in oyster larvae in natural and polluted conditions
G.J. Stroomborg, H. Zappey, R.J.C.A. Steen, C.A.M. van Gestel, F. Ariese, N.H. Velthorst and N.M. van Straalen	129	PAH biotransformation in terrestrial invertebrates—a new phase II metabolite in isopods and springtails
V. Ramaglia, G.M. Harapa, N. White and L.T. Buck	139	Bacterial infection and tissue-specific Hsp72, -73 and -90 expression in western painted turtles
R. Fuguet, M. Théraud and A. Vey	149	Production in vitro of toxic macromolecules by strains of <i>Beauveria bassiana</i> , and purification of a chitosanase-like protein secreted by a melanizing isolate
E.A. Stokes, W. Lonergan, L.P. Weber, D.M. Janz, A.A. Poznanski, G.C. Balch, C.D. Metcalfe and M.S. Grober	163	Decreased apoptosis in the forebrain of adult male medaka (<i>Oryzias latipes</i>) after aqueous exposure to ethinylestradiol
A.G. Reznikov, N.D. Nosenko and L.V. Tarasenko	169	Early postnatal effects of prenatal exposure to glucocorticoids on testosterone metabolism and biogenic monoamines in discrete neuroendocrine regions of the rat brain
L.G. Riley, T. Hirano and E.G. Grau	177	Estradiol-17 β and dihydrotestosterone differentially regulate vitellogenin and insulin-like growth factor-I production in primary hepatocytes of the tilapia <i>Oreochromis mossambicus</i>
S. Franzellitti, C. Locatelli, G. Gerosa, C. Vallini and E. Fabbri	187	Heavy metals in tissues of loggerhead turtles (<i>Caretta caretta</i>) from the northwestern Adriatic Sea
J.G. Lamb, P. Marick, J. Sorensen, S. Haley and M.D. Dearing	195	Liver biotransforming enzymes in woodrats <i>Neotoma stephensi</i> (Muridae)
E.H. Jørgensen, Ø. Aas-Hansen, A.G. Maule, J.E.T. Strand and M.M. Vijayan	203	PCB impairs smoltification and seawater performance in anadromous Arctic charr (<i>Salvelinus alpinus</i>)
T. Lehr and R. Schipp	213	An antagonistic 5-HT receptor system in the auricles of the systemic heart complex of <i>Sepia officinalis</i> L. (Cephalopoda) shows 5-HT ₁ and 5-HT ₄ subtype properties
A.P. Roberts and J.T. Oris	221	Multiple biomarker response in rainbow trout during exposure to hexavalent chromium

- I Instructions to Authors
- IV Announcement for the Second Workshop on Comparative Aspects of Oxidative Stress in Biological Systems

Vol. 138C, No. 3

Contributions from a Conference on Aquatic Animal Models of Human Disease hosted by the American Type Culture Collection and the University of Miami.
Manassas, Virginia, USA, September 29–October 2, 2003
Guest Editor: Michael C. Schmale

Editorial

- M.C. Schmale 229 Aquatic animal models of human disease

Symposium papers

- T. Miyake and C.T. Amemiya 233 BAC libraries and comparative genomics of aquatic chordate species
- E. Shafizadeh, R.T. Peterson and S. Lin 245 Induction of reversible hemolytic anemia in living zebrafish using a novel small molecule
- S.L. Lance, A.S. Peterson and M. Hagedorn 251 Developmental expression of aquaporin-3 in zebrafish embryos (*Danio rerio*)
- R.W. Carter, M.C. Schmale and P.D.L. Gibbs 259 Cloning of anthozoan fluorescent protein genes
- J.A. Yoder 271 Investigating the morphology, function and genetics of cytotoxic cells in bony fish
- S. Meierjohann, M. Scharf and J.-N. Volf 281 Genetic, biochemical and evolutionary facets of *Xmrk*-induced melanoma formation in the fish *Xiphophorus*
- S. Kazianis, V.A. Khanolkar, R.S. Nairn, J.D. Rains, D. Trono, R. Garcia, E.L. Williams and R.B. Walter 291 Structural organization, mapping, characterization and evolutionary relationships of *CDKN2* gene family members in *Xiphophorus* fishes
- W.M. David, D.L. Mitchell and R.B. Walter 301 DNA repair in hybrid fish of the genus *Xiphophorus*
- L.P. Oehlers Jr., S.J. Heater, J.D. Rains, M.C. Wells, W.M. David and R.B. Walter 311 Gene structure, purification and characterization of DNA polymerase β from *Xiphophorus maculatus*
- S.J. Heater, L.P. Oehlers Jr., J.D. Rains and R.B. Walter 325 DNA polymerase β mRNA and protein expression in *Xiphophorus* fish
- E.T. Keller and J.M. Murtha 335 The use of mature zebrafish (*Danio rerio*) as a model for human aging and disease
- C. McMahon, E.V. Semina and B.A. Link 343 Using zebrafish to study the complex genetics of glaucoma
- E. Linney, B. Dobbs-McAuliffe, H. Sajadi and R.L. Malek 351 Microarray gene expression profiling during the segmentation phase of zebrafish development

Contents of volume

R.L. Malek, H. Sajadi, J. Abraham, M.A. Grundy and G.S. Gerhard	363	The effects of temperature reduction on gene expression and oxidative stress in skeletal muscle from adult zebrafish
R.A. Butler, M.L. Kelley, K.E. Olberding, G.R. Gardner and R.J. Van Beneden	375	Aryl hydrocarbon receptor (AhR)-independent effects of 2,3,7,8-tetrachlorodibenzo- <i>p</i> -dioxin (TCDD) on softshell clam (<i>Mya arenaria</i>) reproductive tissue
M.L. Kent, C.M. Whipps, J.L. Matthews, D. Florio, V. Watral, J.K. Bishop-Stewart, M. Poort and L. Bermudez	383	Mycobacteriosis in zebrafish (<i>Danio rerio</i>) research facilities
E.J. Burge, D.T. Gauthier and P.A. Van Veld	391	In vitro response of the striped bass natural resistance-associated macrophage protein, <i>Nramp</i> , to LPS and <i>Mycobacterium marinum</i> exposure
J.J. Rahn, P.D.L. Gibbs and M.C. Schmale	401	Patterns of transcription of a virus-like agent in tumor and non-tumor tissues in bicolor damselfish
	I	Instructions to Authors
	VI	Announcement for the Second Workshop on Comparative Aspects of Oxidative Stress in Biological Systems

Vol. 138C, No. 4

General papers

N. Bodin, T. Burgeot, J.Y. Stanisière, G. Bocquené, D. Menard, C. Minier, I. Boutet, A. Amat, Y. Cherel and H. Budzinski	411	Seasonal variations of a battery of biomarkers and physiological indices for the mussel <i>Mytilus galloprovincialis</i> transplanted into the northwest Mediterranean Sea
A.L. Cecchini, A.M. Soares, R. Cecchini, A.H.C. de Oliveira, R.J. Ward, J.R. Giglio and E.C. Arantes	429	Effect of crotaotin on the biological activity of Asp49 and Lys49 phospholipases A ₂ from <i>Bothrops</i> snake venoms
M.F. Bassissi, M. Alvinerie and A. Lespine	437	Macrocyclic lactones: distribution in plasma lipoproteins of several animal species including humans
M. Giuliani, D. Antuzzi, C. Lajolo, L. Mistura and R. Ricci	445	Influence of β -carotene on lysosomal hydrolases and their natural substrates in major salivary glands of hamsters treated with 7,12-dimethylbenzanthracene (DMBA)
B. Pérez-Cadahía, B. Laffon, E. Páraso and J. Méndez	453	Evaluation of PAH bioaccumulation and DNA damage in mussels (<i>Mytilus galloprovincialis</i>) exposed to spilled <i>Prestige</i> crude oil
N. Puebla-Orsorio, K.S. Ramos, M.H. Falahatpisheh, R. Smith III and L.R. Berghman	461	2,3,7,8-Tetrachlorodibenzo- <i>p</i> -dioxin elicits aryl hydrocarbon receptor-mediated apoptosis in the avian DT40 pre-B-cell line through activation of caspases 9 and 3
L. Kaufmann, F. Schürmann, M. Yiallourous, P. Harrewijn and H. Kayser	469	The serotonergic system is involved in feeding inhibition by pymetrozine. Comparative studies on a locust (<i>Locusta migratoria</i>) and an aphid (<i>Myzus persicae</i>)
A.H. Urdaneta, F. Bolaños and J.M. Gutiérrez	485	Feeding behavior and venom toxicity of coral snake <i>Micrurus nigrocinctus</i> (Serpentes: Elapidae) on its natural prey in captivity

J.S. Miller-Morey and F.M. Van Dolah	493	Differential responses of stress proteins, antioxidant enzymes, and photosynthetic efficiency to physiological stresses in the Florida red tide dinoflagellate, <i>Karenia brevis</i>
H. Amlund and M.H.G. Berntssen	507	Arsenobetaine in Atlantic salmon (<i>Salmo salar</i> L.): influence of seawater adaptation
F. Gagné and C. Blaise	515	Shell protein characteristics and vitellogenin-like proteins in brine shrimp <i>Artemia franciscana</i> exposed to municipal effluent and 20-hydroxyecdysone
A.H. Mahmoud and M.Z. Rizk	523	Free radical scavengers in susceptible/resistant <i>Biomphalaria alexandrina</i> snails before and after infection
<u>Discussions</u>		
C.R. Tyler, R. van Aerle and E.M. Santos	531	ELISAs for detecting vitellogenin in the fathead minnow (<i>Pimephales promelas</i>)—a critical analysis. Response to Mylchreest et al., Comp Biochem Physiol C 134: 251–257, 2003
J.J. Korte, E. Mylchreest and G.T. Ankley	533	Comparative evaluation of ELISAs for detecting vitellogenin in the fathead minnow (<i>Pimephales promelas</i>)—a response to Tyler et al.
	I	Contents of Volume 138
	VII	Subject Index
	XI	Author Index
	XIII	Instruction to Authors



